

B 1
Sub D
cont

a subject whose cAMP-responsive gene expression is [repressed] decreased [due to binding of a cAMP-response-element-binding-protein-2 to a protein or a DNA associated with cAMP-responsive gene expression, or both,] which comprises administering to the subject a compound capable of [interfering with such] inhibiting binding of a cAMP-responsive-element-binding-protein-2 to a transcription factor protein or to a DNA required for cAMP-responsive gene expression in an amount effective to [interfere with binding of the protein or the DNA so as to thereby derepress] increase cAMP-responsive gene expression in the subject and [enhance] thereby improve the subject's long-term memory.--

- B2
- 4. (amended) The method of claim 1, wherein the compound is an organic compound, a peptide, a peptide mimetic, [a small molecule,] or a nucleic acid.--
- 5. (amended) The method of claim 1, wherein the transcription factor protein [associated with cAMP-responsive gene expression comprises] is a cAMP-response-element-binding-protein[-1], a C/EBP protein, [an Aplysia ApC/EBP protein, a human C/EBP β protein,] an AF-1 protein, a c-jun protein, [a fla protein,] or a c-Fos protein.--
- 6. (amended) The method of claim 1, wherein the administration [comprises] is via intralesional, intramuscular or intravenous injection; infusion; liposome mediated delivery; viral infection; [gene bombardment;] topical, nasal, oral, anal, ocular, cerebro-spinal, or otic delivery.--

B3

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C-1

--15.(amended) A method for [treating] improving long-term memory in a subject with a long-term memory defect [due to binding of a cAMP-response-element-binding-protein-2 to a protein or a DNA associated with cAMP-responsive gene expression, or both,] which comprises administering to the subject a compound capable of [interfering with such] inhibiting binding of a cAMP-responsive-element-binding-protein-2 to a transcription factor protein or to a DNA required for cAMP-responsive gene expression in an amount effective to [interfere with the binding of the protein or the DNA so as to] increase cAMP-responsive-gene-expression in the subject and thereby [treat] improve long-term memory in the subject [s long-term memory defect] --

--16.(amended) The method of claim 15, wherein the long-term memory defect [comprises] is age-related memory loss, memory loss due to Alzheimer's Disease, amnesia, memory loss due to ischemia, shock, head trauma, neuronal injury, neuronal toxicity, or neuronal degradation[,]; Parkinson's disease, or senility.--

B4

--19.(amended) The method of claim 15, wherein the compound is an organic compound, a peptide, a peptide mimetic, [a small molecule,] or a nucleic acid.--

--20.(amended) The method of claim 15, wherein the transcription factor protein [comprises] is a cAMP-response-element-binding-protein[-1], a C/EBP protein, [an Aplysia ApC/EBP protein, a human C/EBP β protein,] an AF-1 protein, a c-jun protein, [a fla protein,] or a c-Fos protein.--